D 16

```
FFFFFFFFFFFFFFF        111              111            AAAAAAAAA
FFFFFFFFFFFFFFF        111              111            AAAAAAAAA
FFFFFFFFFFFFFFF        111              111            AAAAAAAAA
FFF                 111111           111111         AAA         AAA
FFF                 111111           111111         AAA         AAA
FFF                 111111           111111         AAA         AAA
FFF                    111              111         AAA         AAA
FFF                    111              111         AAA         AAA
FFF                    111              111         AAA         AAA
FFFFFFFFFFFF           111              111         AAA         AAA
FFFFFFFFFFFF           111              111         AAA         AAA
FFFFFFFFFFFF           111              111         AAA         AAA
FFF                    111              111         AAAAAAAAAAAAAAA
FFF                    111              111         AAAAAAAAAAAAAAA
FFF                    111              111         AAAAAAAAAAAAAAA
FFF                    111              111         AAA         AAA
FFF                    111              111         AAA         AAA
FFF                    111              111         AAA         AAA
FFF                 111111111        111111111      AAA         AAA
FFF                 111111111        111111111      AAA         AAA
FFF                 111111111        111111111      AAA         AAA
```

```
**FILE**ID**TRUNC                                                L  2



          TTTTTTTTTT  RRRRRRRR    UU      UU  NN      NN    CCCCCCCC
          TTTTTTTTTT  RRRRRRRR    UU      UU  NN      NN    CCCCCCCC
              TT      RR      RR  UU      UU  NN      NN  CC
              TT      RR      RR  UU      UU  NN      NN  CC
              TT      RR      RR  UU      UU  NNNN    NN  CC
              TT      RR      RR  UU      UU  NNNN    NN  CC
              TT      RRRRRRRR    UU      UU  NN  NN  NN  CC
              TT      RRRRRRRR    UU      UU  NN  NN  NN  CC
              TT      RR  RR      UU      UU  NN    NNNN  CC
              TT      RR  RR      UU      UU  NN    NNNN  CC
              TT      RR    RR    UU      UU  NN      NN  CC              ....
              TT      RR    RR    UU      UU  NN      NN  CC              ....
              TT      RR      RR  UUUUUUUUUU  NN      NN    CCCCCCCC      ....
              TT      RR      RR  UUUUUUUUUU  NN      NN    CCCCCCCC      ....


          LL            IIIIII      SSSSSSSS
          LL            IIIIII      SSSSSSSS
          LL              II      SS
          LL              II      SS
          LL              II      SS
          LL              II      SS
          LL              II        SSSSSS
          LL              II        SSSSSS
          LL              II              SS
          LL              II              SS
          LL              II              SS
          LL              II              SS
          LLLLLLLLLL    IIIIII    SSSSSSSS
          LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
TRU
V04

;

;

; S
; R
; E
; L
; L
; M
; C
```

```
0 MODULE TRUNC (
0               LANGUAGE (BLISS32),
0               IDENT = 'V04-000'
0               ) =
1 BEGIN
1
1 !
1 !****************************************************************************
1 !*                                                                          *
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1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1
1 !++
1 !
1 ! FACILITY:  F11ACP Structure Level 1
1 !
1 ! ABSTRACT:
1 !
1 !       This routine truncates a file by deallocating the indicated blocks.
1 !
1 ! ENVIRONMENT:
1 !
1 !       STARLET operating system, including privileged system services
1 !       and internal exec routines.
1 !
1 !--
1 !
1 !
1 ! AUTHOR:  Andrew C. Goldstein,  CREATION DATE:  21-Mar-1977  10:41
1 !
1 ! MODIFIED BY:
1 !
1 !       V03-002 ACG0287         Andrew C. Goldstein,    14-Apr-1982  17:18
1 !               Check for index file ID in header rather than FCB
1 !
1 !       V03-001 LMP0023         L. Mark Pilant,          7-Apr-1982  16:45
1 !               Give a privilege violation if attempting to truncate the
1 !               index file (INDEXF.SYS).
1 !
```

```
;   58      0058  1 !           V02-003 ACG35898        Andrew C. Goldstein,    11-Mar-1981  16:31
;   59      0059  1 !                   Update HIBLK in primary file header
;   60      0060  1 !
;   61      0061  1 !           V02-002 ACG0167         Andrew C. Goldstein,    7-May-1980  18:52
;   62      0062  1 !                   Previous revision history moved to F11A.REV
;   63      0063  1 !**
;   64      0064  1
;   65      0065  1
;   66      0066  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;   67      0067  1 REQUIRE 'SRC$:FCPDEF.B32';
;   68      0382  1
;   69      0383  1
;   70      0384  1 FORWARD ROUTINE
;   71      0385  1         TRUNCATE        : NOVALUE,          ! truncate file
;   72      0386  1         TRUNCATE_HEADER : NOVALUE;          ! truncate individual file header
;    74          0387   1 GLOBAL ROUTINE TRUNCATE (FIB, FILE_HEADER, DEALLOCATE) : NOVALUE =
;    75          0388   1
;    76          0389   1 !++
;    77          0390   1 !
;    78          0391   1 ! FUNCTIONAL DESCRIPTION:
;    79          0392   1 !
;    80          0393   1 !       This routine truncates a file to the size indicated in the FIB by
;    81          0394   1 !       deallocating the necessary blocks. The erase flag controls whether
;    82          0395   1 !       the retrieval pointers are erased in the header. The deallocate flag
;    83          0396   1 !       controls whether or not the blocks are actually returned to the
;    84          0397   1 !       storage map.
;    85          0398   1 !
;    86          0399   1 ! CALLING SEQUENCE:
;    87          0400   1 !       TRUNCATE (ARG1, ARG2, ARG3)
;    88          0401   1 !
;    89          0402   1 ! INPUT PARAMETERS:
;    90          0403   1 !       ARG1: address of FIB for operation
;    91          0404   1 !       ARG2: address of file header
;    92          0405   1 !       ARG3: = 1 to return space to storage map
;    93          0406   1 !             = 0 to just clean out header
;    94          0407   1 !
;    95          0408   1 ! IMPLICIT INPUTS:
;    96          0409   1 !       CURRENT_VCB: VCB of volume
;    97          0410   1 !
;    98          0411   1 ! OUTPUT PARAMETERS:
;    99          0412   1 !       NONE
;   100          0413   1 !
;   101          0414   1 ! IMPLICIT OUTPUTS:
;   102          0415   1 !       NONE
;   103          0416   1 !
;   104          0417   1 ! ROUTINE VALUE:
;   105          0418   1 !       NONE
;   106          0419   1 !
;   107          0420   1 ! SIDE EFFECTS:
;   108          0421   1 !       storage bitmap altered
;   109          0422   1 !       file header altered
;   110          0423   1 !
;   111          0424   1 !--
;   112          0425   1
;   113          0426   2 BEGIN
;   114          0427   2
;   115          0428   2 MAP
;   116          0429   2         FIB             : REF BBLOCK,   ! FIB for operation
;   117          0430   2         FILE_HEADER     : REF BBLOCK;   ! file header
;   118          0431   2
;   119          0432   2 LOCAL
;   120          0433   2         FCB             : REF BBLOCK,   ! FCB of current file header
;   121          0434   2         HEADER          : REF BBLOCK,   ! address of current file header
;   122          0435   2         NEW_HEADER      : REF BBLOCK,   ! address of extension file header
;   123          0436   2         MAP_AREA        : REF BBLOCK,   ! file header map area
;   124          0437   2         MAP_POINTER     : REF BBLOCK,   ! pointer to scan map
;   125          0438   2         MAP_COUNT,                      ! retrieval pointer count
;   126          0439   2         VBN,                            ! relative VBN of operation
;   127          0440   2         COUNT,                          ! count of blocks returned
;   128          0441   2         EXT_FID         : BBLOCK [FID$C_LENGTH], ! file ID of extension header
;   129          0442   2         EX_SEGNUM,                      ! segment number of ext header
;   130          0443   2         REREAD,                         ! flag to reread primary header
```

```
2               REREAD2;                                ! flag to update primary header
2
2       LABEL
2               DO_TRUNCATE,                            ! main truncate operation body
2               VBN_LOOP;                               ! main loop to scan for starting VBN
2
2       EXTERNAL
2               CLEANUP_FLAGS   : BITVECTOR,            ! cleanup action flags
2               USER_STATUS     : VECTOR,               ! I/O status block of user
2               CURRENT_VCB     : REF BBLOCK,           ! VCB of volume
2               PRIMARY_FCB     : REF BBLOCK;           ! FCB of file
2
2       EXTERNAL ROUTINE
2               PMS_START_SUB,                          ! start subfunction metering
2               PMS_END_SUB,                            ! end subfunction metering
2               SEARCH_FCB,                             ! search FCB list for FCB
2               MARK_DIRTY,                             ! mark buffer for write-back
2               CHECKSUM,                               ! checksum file header
2               NEXT_HEADER,                            ! read next extension header
2               UPDATE_FILESIZE,                        ! update file size in primary FCB
2               INIT_FCB,                               ! initialize FCB
2               WRITE_HEADER,                           ! write file header
2               READ_HEADER,                            ! read file header
2               DEL_EXTFCB,                             ! delete extension FCB's
2               DELETE_FILE;                            ! delete remainder of file
2
2
2       ! Start metering for this subfunction.
2       !
2
2       PMS_START_SUB (PMS_ALLOC);
2
2       ! Establish the basic pointers. Round up the starting VBN to the next cluster
2       ! boundary and adjust it to a zero start. The block count must be zero (default).
2       !
2
2       HEADER = .FILE_HEADER;
2       FCB = .PRIMARY_FCB;
2
2       ! Check for the index file INDEXF.SYS
2       !
2
2       IF   .HEADER[FH1$W_FID_NUM] EQL FID$C_INDEXF
2       AND .HEADER[FH1$W_FID_SEQ] EQL FID$C_INDEXF
2       THEN ERR_EXIT (SS$_NOPRIV);
2
4       VBN = ((.FIB[FIB$L_EXVBN] - 1 + .CURRENT_VCB[VCB$W_CLUSTER] - 1)
2               / .CURRENT_VCB[VCB$W_CLUSTER]) * .CURRENT_VCB[VCB$W_CLUSTER];
2
2       IF .FIB[FIB$L_EXSZ] NEQ 0 THEN ERR_EXIT (SS$_BADPARAM);
2
2       ! Init the user's return parameters.
2       !
2
2       USER_STATUS[1] = .VBN + 1 - .FIB[FIB$L_EXVBN];
2       FIB[FIB$L_EXVBN] = .VBN + 1;
2       FIB[FIB$L_EXSZ] = 0;
```

```
;  188        0501  2 REREAD = 0;
;  189        0502  2
;  190        0503  2 ! Now scan the file headers for the retrieval pointer containing the starting
;  191        0504  2 ! VBN. If the VBN is off the end of file, report the error; if it coincides,
;  192        0505  2 ! the operation is a noop.
;  193        0506  2 !
;  194        0507  2
;  195        0508  2 DO_TRUNCATE:
;  196        0509  3 BEGIN
;  197        0510  3
;  198        0511  3 VBN_LOOP:
;  199        0512  4 BEGIN
;  200        0513  4 WHILE 1 DO
;  201        0514  5     BEGIN
;  202        0515  5     MAP_AREA = .HEADER + .HEADER[FH1$B_MPOFFSET]*2;
;  203        0516  5     MAP_POINTER = .MAP_AREA + FM1$C_POINTERS;
;  204        0517  5     MAP_COUNT = .MAP_AREA[FM1$B_INUSE] / 2;
;  205        0518  5
;  206        0519  5     WHILE .MAP_COUNT GTR 0 DO
;  207        0520  6         BEGIN
;  208        0521  6         COUNT = .MAP_POINTER[FM1$B_COUNT] + 1;
;  209        0522  6         IF .COUNT GTRU .VBN THEN LEAVE VBN_LOOP;
;  210        0523  6         VBN = .VBN - .COUNT;
;  211        0524  6         MAP_POINTER = .MAP_POINTER + 4;
;  212        0525  6         MAP_COUNT = .MAP_COUNT - 1;
;  213        0526  5         END;
;  214        0527  5
;  215        0528  5 ! We have scanned through an entire header. Chain to the next header if it
;  216        0529  5 ! exists. First check for the boundary condition of starting the truncate
;  217        0530  5 ! at the header boundary to avoid leaving an empty header.
;  218        0531  5 !
;  219        0532  5
;  220        0533  5     IF .VBN EQL 0
;  221        0534  5     THEN
;  222        0535  6         BEGIN
;  223        0536  6         IF .MAP_AREA[FM1$W_EX_FILNUM] EQL 0
;  224        0537  6         THEN LEAVE DO_TRUNCATE            ! truncate coincides with EOF
;  225        0538  6         ELSE LEAVE VBN_LOOP;              ! dump the extension headers
;  226        0539  5         END;
;  227        0540  5
;  228        0541  5     NEW_HEADER = NEXT_HEADER (.HEADER, .FCB);
;  229        0542  5     IF .NEW_HEADER EQL 0 THEN EXITLOOP;
;  230        0543  5     REREAD = 1;
;  231        0544  5     HEADER = .NEW_HEADER;
;  232        0545  5
;  233        0546  5     IF .FCB NEQ 0
;  234        0547  5     THEN FCB = .FCB[FCB$L_EXFCB]
;  235        0548  5     ELSE IF SEARCH_FCB (HEADER[FH1$W_FID]) NEQ 0
;  236        0549  5     THEN ERR_EXIT (SS$_ACCONFLICT);
;  237        0550  4     END;                                  ! end of header scan loop
;  238        0551  4
;  239        0552  5 ERR_EXIT (SS$_ENDOFFILE)
;  240        0553  3 END;                                      ! end of VBN_LOOP
;  241        0554  3
;  242        0555  3 ! We are now pointing at the retrieval pointer in which the truncation starts.
;  243        0556  3 ! Clean out the rest of this header. If there are extension headers, use
;  244        0557  3 ! the delete routine to dispose of them. Also flush extension FCB's, if they
;  245        0558  3  ! exist.
;  246        0559  3  !
;  247        0560  3
;  248        0561  3  MARK_DIRTY (.HEADER);
;  249        0562  3  CLEANUP_FLAGS[CLF_FIXFCB] = 1;
;  250        0563  3  CLEANUP_FLAGS[CLF_INVWINDOW] = 1;
;  251        0564  3  CLEANUP_FLAGS[CLF_CLEANTRUNC] = 1;
;  252        0565  3  KERNEL_CALL (UPDATE_FILESIZE, .FIB[FIB$L_EXVBN] - 1);
;  253        0566  3
;  254        0567  3  ! Update the HIBLK field in the record attributes to reflect the new file
;  255        0568  3  ! size.
;  256        0569  3  !
;  257        0570  3
;  258        0571  3  IF NOT .REREAD
;  259        0572  3  THEN BBLOCK [HEADER[FH1$W_RECATTR], FAT$L_HIBLK] = ROT (.FIB[FIB$L_EXVBN]-1, 16);
;  260        0573  3
;  261        0574  3  TRUNCATE_HEADER (.FIB, .HEADER, .DEALLOCATE, .MAP_POINTER, .VBN);
;  262        0575  3  EX_SEGNUM = .MAP_AREA[FM1$B_EX_SEGNUM] + 1;
;  263        0576  3  EXT_FID[FID$W_NUM] = .MAP_AREA[FM1$W_EX_FILNUM];
;  264        0577  3  EXT_FID[FID$W_SEQ] = .MAP_AREA[FM1$W_EX_FILSEQ];
;  265        0578  3  EXT_FID[FID$W_RVN] = 0;
;  266        0579  3  MAP_AREA[FM1$W_EX_FILNUM] = 0;
;  267        0580  3  MAP_AREA[FM1$W_EX_FILSEQ] = 0;
;  268        0581  3
;  269        0582  3  IF .FCB NEQ 0 AND .FCB NEQ .PRIMARY_FCB
;  270        0583  3  THEN KERNEL_CALL (INIT_FCB, .FCB, .HEADER);
;  271        0584  3
;  272        0585  3  CHECKSUM (.HEADER);
;  273        0586  3  WRITE_HEADER ();
;  274        0587  3
;  275        0588  3  REREAD2 = .REREAD;
;  276        0589  4  IF .DEALLOCATE AND (.EXT_FID[FID$W_NUM] NEQ 0)
;  277        0590  3  THEN
;  278        0591  4      BEGIN
;  279        0592  4      REREAD = 1;
;  280        0593  4      HEADER = NEXT_HEADER (0, .FCB, EXT_FID, .EX_SEGNUM);
;  281        0594  4      KERNEL_CALL (DEL_EXTFCB, .FCB);
;  282        0595  4      DELETE_FILE (.FIB, .HEADER);
;  283        0596  3      END;
;  284        0597  3
;  285        0598  2  END;                                  ! end of block DO_TRUNCATE
;  286        0599  2
;  287        0600  2  ! If this was a truncate of a multi-header file, reread the primary header
;  288        0601  2  ! and update the HIBLK field in the record attributes to reflect the new file
;  289        0602  2  ! size.
;  290        0603  2  !
;  291        0604  2
;  292        0605  2  IF .REREAD
;  293        0606  2  THEN HEADER = READ_HEADER (FIB[FIB$W_FID], .PRIMARY_FCB);
;  294        0607  2
;  295        0608  2  IF .REREAD2
;  296        0609  2  THEN
;  297        0610  3      BEGIN
;  298        0611  3      BBLOCK [HEADER[FH1$W_RECATTR], FAT$L_HIBLK] = ROT (.FIB[FIB$L_EXVBN]-1, 16);
;  299        0612  3      MARK_DIRTY (.HEADER);
;  300        0613  2      END;
;  301        0614  2
;  302        0615  2
;  303        0616  2 ! Stop metering of this subfunction
;  304        0617  2 !
;  305        0618  2
;  306        0619  2 PMS_END_SUB ();
;  307        0620  2
;  308        0621  1 END;                                        ! end of routine TRUNCATE


                                                                       .TITLE  TRUNC
                                                                       .IDENT  \V04-000\

                                                                       .EXTRN  CLEANUP_FLAGS, USER_STATUS
                                                                       .EXTRN  CURRENT_VCB, PRIMARY_FCB
                                                                       .EXTRN  PMS_START_SUB, PMS_END_SUB
                                                                       .EXTRN  SEARCH_FCB, MARK_DIRTY
                                                                       .EXTRN  CHECKSUM, NEXT_HEADER
                                                                       .EXTRN  UPDATE_FILESIZE
                                                                       .EXTRN  INIT_FCB, WRITE_HEADER
                                                                       .EXTRN  READ_HEADER, DEL_EXTFCB
                                                                       .EXTRN  DELETE_FILE, SYS$CMKRNL

                                                                       .PSECT  $CODE$,NOWRT,2

                                             0FFC 00000                .ENTRY  TRUNCATE, Save R2,R3,R4,R5,R6,R7,R8,R9,R10,-; 0387
                                                                               R11                                         :
                   5B 00000000G   9F   9E 00002                MOVAB   @#SYS$CMKRNL, R11                           :
                   5E             08   C2 00009                SUBL2   #8, SP                                      :
                                  08   DD 0000C                PUSHL   #8                                          ; 0474
            0000G  CF             01   FB 0000E                CALLS   #1, PMS_START_SUB                           :
                   55        08   AC   D0 00013                MOVL    FILE_HEADER, HEADER                         ; 0480
                   56     0000G   CF   D0 00017                MOVL    PRIMARY_FCB, FCB                            ; 0481
                   01        02   A5   B1 0001C                CMPW    2(HEADER), #1                               ; 0486
                                  09   12 00020                BNEQ    1$                                          :
                   01        04   A5   B1 00022                CMPW    4(HEADER), #1                               ; 0487
                                  03   12 00026                BNEQ    1$                                          :
                                  24   BF 00028                CHMU    #36                                         ; 0488
                                       04 0002A                RET                                                 :
                   51        04   AC   D0 0002B 1$:            MOVL    FIB, R1                                     ; 0490
                   50     0000G   CF   D0 0002F                MOVL    CURRENT_VCB, R0                             :
                   52        3C   A0   3C 00034                MOVZWL  60(R0), R2                                  :
                   52        1C   A1   C0 00038                ADDL2   28(R1), R2                                  :
                   52             02   C2 0003C                SUBL2   #2, R2                                      :
                   53        3C   A0   3C 0003F                MOVZWL  60(R0), R3                                  ; 0491
                   52             53   C6 00043                DIVL2   R3, R2                                      :
                   54        3C   A0   3C 00046                MOVZWL  60(R0), VBN                                 :
                   54             52   C4 0004A                MULL2   R2, VBN                                     :
                             18   A1   D5 0004D                TSTL    24(R1)                                      ; 0493
                                  03   13 00050                BEQL    2$                                          :
                                  14   BF 00052                CHMU    #20                                         :
                                       04 00054                RET                                                 :
                   50        04   AC   D0 00055 2$:            MOVL    FIB, R0                                     ; 0498
        51         54        1C   A0   C3 00059                SUBL3   28(R0), VBN, R1                             :
            0000G  CF             01   A1   9E 0005E           MOVAB   1(R1), USER_STATUS+4                        :
               1C  A0             01   A4   9E 00064           MOVAB   1(R4), 28(R0)                               ; 0499
                             18   A0   D4 00069                CLRL    24(R0)                                      ; 0500
                                  59   D4 0006C                CLRL    REREAD                                      ; 0501
```

```
                 50        01    A5  9A 0006E 3$:     MOVZBL  1(HEADER), R0                 ; 0515
                 52            6540  3E 00072         MOVAW   (HEADER)[R0], MAP_AREA        ;
                 53        0A    A2  9E 00076         MOVAB   10(R2), MAP_POINTER           ; 0516
                 58        08    A2  9A 0007A         MOVZBL  8(MAP_AREA), MAP_COUNT        ; 0517
                 58              02  C6 0007E         DIVL2   #2, MAP_COUNT                 ;
                                 15  15 00081 4$:     BLEQ    5$                            ; 0519
                 57        01    A3  9A 00083         MOVZBL  1(MAP_POINTER), COUNT         ; 0521
                                 57  D6 00087         INCL    COUNT                         ;
                 54              57  D1 00089         CMPL    COUNT, VBN                    ; 0522
                                 49  1A 0008C         BGTRU   9$                            ;
                 54              57  C2 0008E         SUBL2   COUNT, VBN                    ; 0523
                 53              04  C0 00091         ADDL2   #4, MAP_POINTER               ; 0524
                                 58  D7 00094         DECL    MAP_COUNT                     ; 0525
                                 E9  11 00096         BRB     4$                            ; 0519
                                 54  D5 00098 5$:     TSTL    VBN                           ; 0533
                                 08  12 0009A         BNEQ    6$                            ;
                           02    A2  B5 0009C         TSTW    2(MAP_AREA)                   ; 0536
                                 36  12 0009F         BNEQ    9$                            ;
                               00D9  31 000A1         BRW     12$                           ; 0537
                 7E              55  7D 000A4 6$:     MOVQ    HEADER, -(SP)                 ; 0541
          0000G  CF              02  FB 000A7         CALLS   #2, NEXT_HEADER               ;
                 5A              50  D0 000AC         MOVL    R0, NEW_HEADER                ;
                                 21  13 000AF         BEQL    8$                            ; 0542
                 59              01  D0 000B1         MOVL    #1, REREAD                    ; 0543
                 55              5A  D0 000B4         MOVL    NEW_HEADER, HEADER            ; 0544
                                 56  D5 000B7         TSTL    FCB                           ; 0546
                                 06  13 000B9         BEQL    7$                            ;
                 56        0C    A6  D0 000BB         MOVL    12(FCB), FCB                  ; 0547
                                 AD  11 000BF         BRB     3$                            ;
                           02    A5  9F 000C1 7$:     PUSHAB  2(HEADER)                     ; 0548
          0000G  CF              01  FB 000C4         CALLS   #1, SEARCH_FCB                ;
                                 50  D5 000C9         TSTL    R0                            ;
                                 A1  13 000CB         BEQL    3$                            ;
                         0800    8F  BF 000CD         CHMU    #2048                         ; 0549
                                     04 000D1         RET                                   ;
                         0870    8F  BF 000D2 8$:     CHMU    #2160                         ; 0552
                                     04 000D6         RET                                   ;
                                 55  DD 000D7 9$:     PUSHL   HEADER                        ; 0561
          0000G  CF              01  FB 000D9         CALLS   #1, MARK_DIRTY                ;
          0000G  CF  00080012    8F  C8 000DE         BISL2   #524306, CLEANUP_FLAGS        ; 0564
                 57        04    AC  D0 000E7         MOVL    FIB, R7                       ; 0565
     58      1C  A7              01  C3 000EB         SUBL3   #1, 28(R7), R8                ;
                                 58  DD 000F0         PUSHL   R8                            ;
                                 01  DD 000F2         PUSHL   #1                            ;
                                 5E  DD 000F4         PUSHL   SP                            ;
                        0000G    CF  9F 000F6         PUSHAB  UPDATE_FILESIZE               ;
                 6B              04  FB 000FA         CALLS   #4, SYS$CMKRNL                ;
                 05              59  E8 000FD         BLBS    REREAD, 10$                   ; 0571
12   A5          58              10  9C 00100         ROTL    #16, R8, 18(HEADER)           ; 0572
                                 18  BB 00105 10$:    PUSHR   #^M<R3,R4>                    ; 0574
                           0C    AC  DD 00107         PUSHL   DEALLOCATE                    ;
                                 55  DD 0010A         PUSHL   HEADER                        ;
                                 57  DD 0010C         PUSHL   R7                            ;
          0000V  CF              05  FB 0010E         CALLS   #5, TRUNCATE_HEADER           ;
                 53              62  9A 00113         MOVZBL  (MAP_AREA), EX_SEGNUM         ; 0575
                                 53  D6 00116         INCL    EX_SEGNUM                     ;
                 6E        02    A2  D0 00118         MOVL    2(MAP_AREA), EXT_FID          ; 0576
```

```
                                                04   AE  B4 0011C         CLRW    EXT_FID+4                                   ; 0578
                                                02   A2  D4 0011F         CLRL    2(MAP_AREA)                                 ; 0579
                                                     56  D5 00122         TSTL    FCB                                         ; 0582
                                                     16  13 00124         BEQL    11$                                         ;
                                0000G  CF            56  D1 00126         CMPL    FCB, PRIMARY_FCB                            ;
                                                     0F  13 0012B         BEQL    11$                                         ;
                                                     55  DD 0012D         PUSHL   HEADER                                      ; 0583
                                                     56  DD 0012F         PUSHL   FCB                                         ;
                                                     02  DD 00131         PUSHL   #2                                          ;
                                                     5E  DD 00133         PUSHL   SP                                          ;
                                              0000G  CF  9F 00135         PUSHAB  INIT_FCB                                    ;
                                       6B            05  FB 00139         CALLS   #5, SYS$CMKRNL                              ;
                                                     55  DD 0013C 11$:    PUSHL   HEADER                                      ; 0585
                                0000G  CF            01  FB 0013E         CALLS   #1, CHECKSUM                                ;
                                0000G  CF            00  FB 00143         CALLS   #0, WRITE_HEADER                            ; 0586
                                       52            59  D0 00148         MOVL    REREAD, REREAD2                             ; 0588
                                       2E       0C   AC  E9 0014B         BLBC    DEALLOCATE, 12$                             ; 0589
                                                     6E  B5 0014F         TSTW    EXT_FID                                     ;
                                                     2A  13 00151         BEQL    12$                                         ;
                                       59            01  D0 00153         MOVL    #1, REREAD                                  ; 0592
                                                     53  DD 00156         PUSHL   EX_SEGNUM                                   ; 0593
                                                04   AE  9F 00158         PUSHAB  EXT_FID                                     ;
                                                     56  DD 0015B         PUSHL   FCB                                         ;
                                                     7E  D4 0015D         CLRL    -(SP)                                       ;
                                0000G  CF            04  FB 0015F         CALLS   #4, NEXT_HEADER                             ;
                                       55            50  D0 00164         MOVL    R0, HEADER                                  ;
                                                     56  DD 00167         PUSHL   FCB                                         ; 0594
                                                     01  DD 00169         PUSHL   #1                                          ;
                                                     5E  DD 0016B         PUSHL   SP                                          ;
                                              0000G  CF  9F 0016D         PUSHAB  DEL_EXTFCB                                  ;
                                       6B            04  FB 00171         CALLS   #4, SYS$CMKRNL                              ;
                                                     55  DD 00174         PUSHL   HEADER                                      ; 0595
                                                     57  DD 00176         PUSHL   R7                                          ;
                                0000G  CF            02  FB 00178         CALLS   #2, DELETE_FILE                             ;
                                       11            59  E9 0017D 12$:    BLBC    REREAD, 13$                                 ; 0605
                                              0000G  CF  DD 00180         PUSHL   PRIMARY_FCB                                 ; 0606
                         7E        04  AC            04  C1 00184         ADDL3   #4, FIB, -(SP)                              ;
                                0000G  CF            02  FB 00189         CALLS   #2, READ_HEADER                             ;
                                       55            50  D0 0018E         MOVL    R0, HEADER                                  ;
                                       15            52  E9 00191 13$:    BLBC    REREAD2, 14$                                ; 0608
                                       50       04   AC  D0 00194         MOVL    FIB, R0                                     ; 0611
                         50        1C  A0            01  C3 00198         SUBL3   #1, 28(R0), R0                              ;
                     12  A5            50            10  9C 0019D         ROTL    #16, R0, 18(HEADER)                         ;
                                                     55  DD 001A2         PUSHL   HEADER                                      ; 0612
                                0000G  CF            01  FB 001A4         CALLS   #1, MARK_DIRTY                              ;
                                0000G  CF            00  FB 001A9 14$:    CALLS   #0, PMS_END_SUB                             ; 0619
                                                         04 001AE         RET                                                 ; 0621

; Routine Size:  431 bytes,    Routine Base:  $CODE$ + 0000
```

```
1 GLOBAL ROUTINE TRUNCATE_HEADER (FIB, HEADER, DEALLOCATE, POINTER, LAST_COUNT) : NOVALUE =
1
1 !++
1 !
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine returns the indicated retrieval pointers in the given
1 !       file header to the storage map and erases them in the file header.
1 !
1 !
1 ! CALLING SEQUENCE:
1 !       TRUNCATE_HEADER (ARG1, ARG2, ARG3, ARG4, ARG5)
1 !
1 ! INPUT PARAMETERS:
1 !       ARG1: address of FIB of operation
1 !       ARG2: address of file header
1 !       ARG3: = 1 to return space to the storage map
1 !             = 0 to just erase the retrieval pointers
1 !       ARG4: address of first retrieval pointer to process, if present
1 !       ARG5: new count field of first pointer, if present
1 !
1 ! IMPLICIT INPUTS:
1 !       NONE
1 !
1 ! OUTPUT PARAMETERS:
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !       NONE
1 !
1 ! ROUTINE VALUE:
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !       file header altered, storage map altered
1 !
1 !--
1
2 BEGIN
2
2 MAP
2       FIB             : REF BBLOCK,   ! user FIB
2       HEADER          : REF BBLOCK;   ! file header
2
2 LOCAL
2       MAP_AREA        : REF BBLOCK,   ! address of file header map area
2       MAP_POINTER     : REF BBLOCK,   ! pointer to map pointers
2       MAP_END,                        ! address of end of map area
2       COUNT,                          ! count field of current retrieval pointer
2       LBN,                            ! LBN field of current retrieval pointer
2       RP_COUNT;                       ! new count field for retrieval pointer
2
2 EXTERNAL ROUTINE
2       RETURN_BLOCKS;                  ! return blocks to storage map
2
2
2 ! Establish pointers into the file header. If explicit args are supplied, use
```

```
;  367        0679  2 ! them; else default to releasing the entire file header.
;  368        0680  2 !
;  369        0681  2
;  370        0682  2 MAP_AREA = .HEADER + .HEADER[FH1$B_MPOFFSET]*2;
;  371        0683  2 MAP_POINTER = .MAP_AREA + FM1$C_POINTERS;
;  372        0684  2 MAP_END = .MAP_POINTER + .MAP_AREA[FM1$B_INUSE]*2;
;  373        0685  2 RP_COUNT = 0;
;  374        0686  2
;  375        0687  2 IF ACTUALCOUNT GEQ 4
;  376        0688  2 THEN
;  377        0689  3     BEGIN
;  378        0690  3     MAP_POINTER = .POINTER;
;  379        0691  3     RP_COUNT = .LAST_COUNT;
;  380        0692  2     END;
;  381        0693  2
;  382        0694  2 ! Now scan the map area, cleaning out pointers and releasing blocks.
;  383        0695  2 !
;  384        0696  2
;  385        0697  2 UNTIL .MAP_POINTER GEQA .MAP_END DO
;  386        0698  3     BEGIN
;  387        0699  3     COUNT = .MAP_POINTER[FM1$B_COUNT] + 1;
;  388        0700  3     LBN = .MAP_POINTER[FM1$W_LOWLBN];
;  389        0701  3     LBN<16,8> = .MAP_POINTER[FM1$B_HIGHLBN];
;  390        0702  3     IF .RP_COUNT NEQ 0
;  391        0703  3     THEN
;  392        0704  3         MAP_POINTER[FM1$B_COUNT] = .RP_COUNT - 1
;  393        0705  3     ELSE
;  394        0706  4         BEGIN
;  395        0707  4         MAP_POINTER[FM1$B_HIGHLBN] = 0;
;  396        0708  4         MAP_POINTER[FM1$B_COUNT] = 0;
;  397        0709  4         MAP_POINTER[FM1$W_LOWLBN] = 0;
;  398        0710  4         MAP_AREA[FM1$B_INUSE] = .MAP_AREA[FM1$B_INUSE] - 2;
;  399        0711  3         END;
;  400        0712  3
;  401        0713  3     IF .DEALLOCATE THEN RETURN_BLOCKS (.LBN + .RP_COUNT, .COUNT - .RP_COUNT);
;  402        0714  3     FIB[FIB$L_EXSZ] = .FIB[FIB$L_EXSZ] + .COUNT - .RP_COUNT;
;  403        0715  3     RP_COUNT = 0;
;  404        0716  3     MAP_POINTER = .MAP_POINTER + 4;
;  405        0717  2     END;
;  406        0718  2
;  407        0719  1 END;                                       ! end of routine TRUNCATE_HEADER


                                                            .EXTRN  RETURN_BLOCKS

                                        01FC 00000          .ENTRY  TRUNCATE_HEADER, Save R2,R3,R4,R5,R6,R7,R8   ; 0622
                        51      08   AC   D0 00002          MOVL    HEADER, R1                                   ; 0682
                        50      01   A1   9A 00006          MOVZBL  1(R1), R0                                    ;
                        53         6140   3E 0000A          MOVAW   (R1)[R0], MAP_AREA                           ;
                        52      0A   A3   9E 0000E          MOVAB   10(R3), MAP_POINTER                          ; 0683
                        50      08   A3   9A 00012          MOVZBL  8(MAP_AREA), R0                              ; 0684
                        58         6240   3E 00016          MOVAW   (MAP_POINTER)[R0], MAP_END                   ;
                                     56   D4 0001A          CLRL    RP_COUNT                                     ; 0685
                        04           6C   91 0001C          CMPB    (AP), #4                                     ; 0687
                                     08   1F 0001F          BLSSU   1$                                           ;
                        52      10   AC   D0 00021          MOVL    POINTER, MAP_POINTER                         ; 0690
```

```
                          56       14   AC  D0 00025       MOVL    LAST_COUNT, RP_COUNT                    ; 0691
                          54       04   AC  D0 00029 1$:   MOVL    FIB, R4                                 ; 0714
                          53            52  D1 0002D 2$:   CMPL    MAP_POINTER, MAP_END                    ; 0697
                                        41  1E 00030       BGEQU   6$                                      ;
                          57       01   A2  9A 00032       MOVZBL  1(MAP_POINTER), COUNT                   ; 0699
                                        57  D6 00036       INCL    COUNT                                   ;
                          55       02   A2  3C 00038       MOVZWL  2(MAP_POINTER), LBN                     ; 0700
        55          08    10            62  F0 0003C       INSV    (MAP_POINTER), #16, #8, LBN             ; 0701
                                        56  D5 00041       TSTL    RP_COUNT                                ; 0702
                                        07  13 00043       BEQL    3$                                      ;
             01     A2    56            01  83 00045       SUBB3   #1, RP_COUNT, 1(MAP_POINTER)            ; 0704
                                        06  11 0004A       BRB     4$                                      ;
                                        62  D4 0004C 3$:   CLRL    (MAP_POINTER)                           ; 0707
                    08    A3            02  82 0004E       SUBB2   #2, 8(MAP_AREA)                         ; 0710
                          0C       0C   AC  E9 00052 4$:   BLBC    DEALLOCATE, 5$                          ; 0713
                    7E    57            56  C3 00056       SUBL3   RP_COUNT, COUNT, -(SP)                  ;
                                      6645  9F 0005A       PUSHAB  (RP_COUNT)[LBN]                         ;
                 0000G    CF            02  FB 0005D       CALLS   #2, RETURN_BLOCKS                       ;
                    50    57       18   A4  C1 00062 5$:   ADDL3   24(R4), COUNT, R0                       ; 0714
             18     A4    50            56  C3 00067       SUBL3   RP_COUNT, R0, 24(R4)                    ;
                                        56  D4 0006C       CLRL    RP_COUNT                                ; 0715
                          52            04  C0 0006E       ADDL2   #4, MAP_POINTER                         ; 0716
                                        BA  11 00071       BRB     2$                                      ; 0697
                                            04 00073 6$:   RET                                             ; 0719

; Routine Size:  116 bytes,    Routine Base:  $CODE$ + 01AF


;   408         0720  1
;   409         0721  1 END
;   410         0722  0 ELUDOM




;                                PSECT SUMMARY
;
;       Name                    Bytes                        Attributes
;
;   $CODE$                          547  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                           Library Statistics
;
;                                            -------- Symbols --------        Pages        Processing
;       File                                 Total    Loaded   Percent        Mapped       Time
;
;   _$255$DUA28:[SYSLIB]LIB.L32;1            18619        29         0        1000           00:02.0
;                                       COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:TRUNC/OBJ=OBJ$:TRUNC MSRC$:TRUNC/UPDATE=(ENH$:TRUNC)

; Size:           547 code + 0 data bytes
; Run Time:          00:15.3
; Elapsed Time:      00:33.6
; Lines/CPU Min:      2835
; Lexemes/CPU-Min: 14811
; Memory Used:  184 pages
; Compilation Complete
```

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VAX/VMS V4.0

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